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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,305	03/30/2004	Masahiro Shimada	63594.00002	1822
32294	7590	10/03/2005	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			HOLMES, JUSTIN K	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

*nl*

## Office Action Summary

Application No.

10/812,305

Applicant(s)

SHIMADA, MASAHIRO

Examiner

Justin K. Holmes

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2,3,5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/30/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/9/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) on August 9, 2004, which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The Examiner acknowledges receipt of the Information Disclosure Statement filed on August 9, 2004, which has been considered.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,123,884 to Kondoh et al. in view of WO 2003025104 (translation is U.S. Patent Publication No. US 2004/0171500 A1 to Morita).

The Kondoh et al. patent teaches a planetary speed changing device having an input shaft 21, externally toothed gears 25<sub>1</sub>, 25<sub>2</sub> mounted on eccentric members 23<sub>1</sub>, 23<sub>2</sub> having external teeth 27 with trochoidal teeth shape (column 4, lines 1-8), and an internally toothed gear 28 having arcuate teeth provided by outer pins 29 which engage the teeth of the externally toothed gears 25<sub>1</sub>, 25<sub>2</sub>. (column 4, lines 1-15). A space is formed between the externally toothed gears 25<sub>1</sub>, 25<sub>2</sub> and the internally toothed gear 28 as shown in Fig. 2. The Kondoh et al. patent lacks a teaching of filling the space

Art Unit: 3681

formed between the externally toothed gears 25<sub>1</sub>, 25<sub>2</sub> and the internally toothed gear 28 with a grease which contains at least a base oil having a kinetic viscosity being not less than 10 mm<sup>2</sup>/s at 100 degrees C and a lithium complex thickener synthesized from adipic acid.

The Morita publication teaches a lubricating oil having a base oil having a kinetic viscosity at 100 degrees C of between 4 and 30 mm<sup>2</sup>/s. (page 9, paragraph 0157). The lubricant has a first component of a mono carboxylic acid (fatty acid) combined with a lithium complex such as lithium borate. (page 3, paragraphs 0039-0042). An adipic acid as broadly recited in Claims 1 and 4 is defined as a fatty acid in the Morita publication. A lithium complex as broadly recited in Claims 1 and 4 is defined as the various lithium borates as disclosed in the Morita publication. (page 3, paragraph 0042).

Accordingly, it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the device disclosed in the Kondoh et al. patent and fill the space formed between the externally toothed gears 25<sub>1</sub>, 25<sub>2</sub> and the internally toothed gear 28 with a grease which contains at least a base oil having a kinetic viscosity being not less than 10 mm<sup>2</sup>/s at 100 degrees C and a lithium complex thickener synthesized from adipic acid as taught by the Morita publication. The motivation for doing so would be to improve the anti-wear properties and capable of inhibiting pitching of the gear. See page 1, paragraph 0004 of the Morita publication.

***Allowable Subject Matter***

5. Claims 2, 3, 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 5,176,040 to Kawabe; U.S. Patent No. 4,842,752 to Hardy et al.; and U.S. Patent No. 2,782,166 to Kolfenbach et al. all disclose lubricants and gear systems.

***Facsimile Transmission***

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Art Unit: 3681

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on \_\_\_\_\_ (Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
\_\_\_\_\_

(Signature)


If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin K. Holmes whose telephone number is (571) 272-5930. The examiner can normally be reached on 8:00am to 4:30pm Monday-Friday.

Art Unit: 3681

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JKH  
9/28/05

  
TISHA LEWIS  
PRIMARY EXAMINER  
HU 3681 9/29/05